ABSTRACT OF THE DISCLOSURE

A processor generates a mode indication based on two or more other indications. The mode indication is indicative of whether or not a particular mode is active in the processor. Each indication is stored in a storage location which is addressable via a different instruction. In one embodiment, a long mode in which a 64 bit operating mode is selectable in addition to 32 bit and 16 bit modes may be activated via a long mode active indication. The long mode active indication may be generated by the processor, and may indicate that long mode is active if paging is enabled and a long mode enable indication indicates that long mode is enabled. In this manner, long mode may be activated after paging is enabled (with a set of long mode page tables indicated by the page table base address).